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United States
Department of
Agriculture

Forest Service

Tongass
National
Forest
R10-MB-205

January 1993



Alaska Pulp Corporation Long-Term Timber Sale Contract

North and East Kuiu Final Environmental Impact Statement

Summary

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North and East Kuiu Final Environmental Impact Statement Summary

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Abstract: The U.S. Forest Service proposes a range of alternatives for making timber volume available to the Alaska Pulp Corporation Long-term Timber Sale Contract. Alternative 1 is the no action alternative. Alternative 2 focuses activities in areas of previous timber harvest (north Kuiu) while Alternative 3 focuses activities away from areas of recent timber harvest (east Kuiu). Alternative 4 disperses activities across the study area.

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SUMMARY

Overview of Project

In compliance with Federal and State regulations, the U.S. Forest Service has prepared this Final Environmental Impact Statement (FEIS) on the effects of implementing the provisions of the Alaska Pulp Corporation Long-Term Sale Contract in the North Kuiu and East Kuiu Management Areas of the Tongass National Forest. The National Environmental Policy Act (NEPA) required that (1) a range of alternatives for achieving the project's goals be put forth, (2) an analysis of the environmental impacts of each alternative be conducted, (3) measures to mitigate adverse impacts be discussed, and finally, (4) the view of interested members of the public be sought and incorporated into the final plan. This FEIS accomplishes these objectives.

Proposed Action

The Forest Service proposes to make available for harvest by Alaska Pulp Corporation approximately 120 million board feet (MMBF) of sawlog from Management Areas S04 and S09 on Kuiu Island. In addition to the sawlog volume, utility volume will also be harvested from the same acres. (Utility logs do not meet the quality standards for sawlogs, but apply toward the volume requirements of the long-term contract.) This project includes the construction of up to approximately 100 miles of forest development roads.

Purpose and Need for Action

The purpose and need for this project is to implement Forest Plan direction for the project area, meet the federal government obligation to make timber volume available under the APC contract, and to improve the timber productivity of the project area by harvesting mature stands of timber and replacing them with faster growing stands of second growth timber. The timber volume needed for this project is approximately 120 million board feet (MMBF) of net sawlogs. This is enough volume to supply the Rowan Bay camp for three years.

Management Direction

Management direction for the study area is found in the current Tongass Land Management Plan. The Land Management Plan identifies these management areas (S04 and S09) as one of the principal land bases for timber production for the Alaska Pulp Corporation (APC) timber sale contract. The northern and eastern portions of Kuiu Island are to be managed to fulfill a substantial portion of APC's timber volume commitment with the United States. This area has been incorporated into the contract as a contingency area for providing timber from public lands to a dependent industry.

Background

In order to encourage economic development, including stable employment, in southeast Alaska, the Congress of the United States authorized the Forest Service to enter into long term timber sale contracts. Accordingly, the Forest Service and Alaska Lumber and Pulp Corporation, now Alaska Pulp Corporation (APC), entered into a 50-year contract in 1956. Under the terms of this agreement the Forest Service is obligated to make timber available for harvest by APC on Baranof, Chichagof, Kuiu, and other associated islands.

In November of 1990, President Bush signed the Tongass Timber Reform Act. This Act reaffirmed Congressional intentions to continue the long-term timber sale contracts in Alaska. The Act specified that commercial timber harvest would not be harvested within at least 100 feet of anadromous fish streams and provided direction for modification of the long-term contracts to make them similar to independent timber sale contracts. The Act also provided direction about which lands should be designated as wilderness, which lands should be managed primarily for roadless recreation, and which lands would be managed for timber production. All of the alternatives considered in this EIS are consistent with this legislation.

Decision Needed

The decision to be made is whether to make timber available for harvest to meet contractual obligations to APC and improve timber productivity in the North And East Kuiu Project area while also providing a combination of recreation, fish, water, and wildlife for the needs of society now and into the future. If timber is made available for harvest, Abigail R. Kimbell, Forest Supervisor, Tongass National Forest, Stikine Area, will decide (a) whether to proceed with the project and how much volume to make available; (b) the location and design of the timber harvest units and necessary log transfer facilities; (c) the location and design of associated mainline and local road corridors; and (d) mitigation measures and enhancement opportunities for all resources in the project area.

Issues

Eleven issues have been identified through the scoping process. These issues establish the extent and depth of analysis need for this EIS. They also provide a basis for the formulation of alternatives. Each alternative considered in the EIS addresses the issues differently. The issues identified for the North and East Kuiu Project follow:

- 1. CULTURAL RESOURCES - How should timber management activities be designed to protect cultural resources?**
- 2. ECONOMICS - How should the project be designed to contribute to the economic health of southeast Alaska?**
- 3. FISH - How would fish habitat be managed and what effects would timber harvest and related activities have on fish habitat?**
- 4. MARINE ENVIRONMENT - If Log Transfer Facilities are considered, how should they be designed and located to minimize the effects on the marine environment?**
- 5. RECREATION -How should recreation opportunities be protected or enhanced in the design of timber management activities?**
- 6. SOIL - How should timber management activities be designed to protect the soil resource? What effects would activities have on soil productivity?**
- 7. SUBSISTENCE - How should timber management activities be designed to protect traditional subsistence uses? What effect would activities have on subsistence uses?**
- 8. TIMBER MANAGEMENT - How should the project be designed to provide for efficient and productive long-term timber management?**
- 9. VISUAL RESOURCE - How should timber management activities be designed to protect areas of high scenic quality and what effect would activities have on the landscapes of Kuiu Island?**
- 10. WATER QUALITY - How should timber management activities be designed to protect the water quality? What effects would activities have on water quality?**
- 11. WILDLIFE HABITAT - What effects would timber harvest and related activities have on wildlife habitat?**

Alternatives

This EIS documents four alternatives. One is a "no action alternative" and three others are "action" alternatives that describe different approaches to timber harvest, road construction, and related activities to make timber on Kuiu Island available for harvest to meet the contractual obligations of the Alaska Pulp Corporation Long-Term Timber Sale Contract. In addition to describing the alternatives, this EIS documents the analysis of the expected outputs and effects of the alternatives. The alternatives considered in detail are:

Alternative 1 - No Action Alternative

This is the no action alternative which is required by NEPA. It assumes no change in the current management. At the current rate of harvest on Kuiu Island, all the timber volume made available for harvest through previous decisions is expected to have been harvested by the time a decision is issued on this project. Because no previously authorized harvestable volume will remain in the project area, the effects of this no action alternative are the same as an alternative that would halt previously authorized harvest activities. This alternative assumes that contractual requirements for timber volume could be met by making timber available from areas other than Kuiu Island. Because of this, the no action alternative does not include consideration of, nor analysis of, the social, environmental, or economic costs and benefits of closing the mills in Sitka and Wrangell. For the same reason, consideration of the costs and benefits of operating the mills is beyond the scope of the action alternatives.

Alternative 2

This alternative would minimize entry in the mostly un-roaded East Kuiu Management Area, but instead concentrate harvest in the already developed portions of North Kuiu. By deferring harvest on east Kuiu, the primitive character of this area is maintained through the life of this timber offering, but the concentrated harvest on north Kuiu will result in a near maximum level of development and harvest in some watersheds.

Some important elements of this alternative are the protection of the wild and scenic river potential of Kadake Creek and Fall Dog Creek (Security Bay); and the maintenance of large blocks of old-growth habitat in West Security Bay, adjacent to Salt Lagoon, and near the mouth of Kadake Creek. Implementation of this alternative would include the harvesting of approximately 10 million board feet (MMBF) of timber from 4,762 acres of forest. Most of the harvest would be by clearcutting, however 1.3 MMBF would be harvested from VCU 399, unit 19 using a group selection silvicultural system designed to mimic natural blow-down in order to protect wildlife habitat and visual quality. Helicopter yarding would be employed on 431 acres, the remainder would be yarded by shovel loader or cable systems. About 56 miles of new forest development roads would be constructed.

Alternative 3

This alternative would schedule most of the harvest for this offering on East Kuiu. Capital investments in infrastructure would be emphasized to facilitate future management.

Implementation of this alternative would include the harvesting of approximately 116 MMBF of timber from 5,527 acres of forest. Most of the harvest would be by clearcutting, however approximately 0.6 MMBF would be harvested from VCU 416, unit 7 using a group selection silvicultural system as part of a research effort on alternative silvicultural systems. Helicopter yarding would be employed on 379 acres, the remainder would be yarded by shovel loader or cable systems. About 83 miles of new forest development roads would be constructed.

Alternative 4

This alternative will maintain options through the life of this offering by spreading the harvest over both north and east Kuiu, but deferring harvest in the more sensitive parts of both management areas. Harvest units will be designed in a manner that provides for a high degree of resource protection. Investments in mitigation and capital investments will be high.

Implementation of this alternative would include the harvesting of approximately 118 MMBF of timber from 5,203 acres of forest. Most of the harvest would be by clearcutting, however approximately 0.6 MMBF would be harvested from VCU 416, unit 7 using a group selection silvicultural system as part of a research effort on alternative silvicultural systems. An additional 1.3 MMBF would be harvested from VCU 399, unit 19 using a group selection silvicultural system designed to mimic natural blowdown in order to protect wildlife habitat and visual quality. Helicopter yarding would be employed on 431 acres, the remainder would be yarded by shovel loader or cable systems. About 60 miles of new forest development roads would be constructed.

Comparison of Alternatives by Issue

The comparison of alternatives presents conclusions from the materials presented throughout the Final EIS and summarizes the results of the analysis. This section focuses on a comparison of the alternatives based on how each of the alternatives would address the eleven issues described earlier. Chapter 3 of the Final EIS contains the detailed evaluation of the potential effects summarized here. Table S-1 presents a summary comparison of the alternatives. The narrative that follows the table is a discussion of how each alternative would respond to each of the issues.

Table S-1		
Summary Comparison of Alternatives		
Issue	Alternative 1 No Action	Alternative 2 North Kuiu
Cultural Resources	No impacts.	No impacts to sites eligible for inclusion in the National Register of Historic Places.
Economics	The logging camp at Rowan Bay would be closed and the families and workers displaced.	Harvest volume would provide approx. 296 jobs over a three year period and provide \$ 9,856,000/year income to the local economy. Net stumpage value is positive at \$ 50.24/MBF.
Fish Habitat		
Riparian Habitat	No additional impact.	2.6 miles of Class I 100' buffers. 1.4 miles of Class I 100'+ buffers.
Road Crossings	No additional impact.	16 crossings of Class I streams.
Sediment production	No additional impact.	Application of BMPs will minimize sediment.
Marine Environment	No additional impact.	Existing LTFs at Rowan Bay and Saginaw Bay will be used. Increase in depth of the 30-acre bark accumulation at Rowan Bay and less than one acre accumulation at Saginaw Bay is expected.

Alternative 3	Alternative 4
East Kuiu	North and East Kuiu
No impacts to sites eligible for inclusion in the National Register of Historic Places.	No impacts to sites eligible for inclusion in the National Register of Historic Places.
Harvest volume would provide for approx. 337 jobs over a three year period and provide \$10,989,000/year income to the local economy. Net stumpage value is positive at \$ 9.04/MBF.	Harvest volume would provide for approx. 342 jobs over a three year period and provide \$11,389,000/year income to the local economy. Net stumpage value is positive at \$ 58.93/MBF.
6.1 miles of Class I 100' buffers. 2.7 miles of Class I 100'+ buffers.	5.1 miles of Class I 100' buffers. 3.1 miles of Class I 100'+ buffers.
45 crossings of Class I streams.	25 crossings of Class I streams.
Application of BMPs will minimize sediment.	Application of BMPs will minimize sediment.
Same as Alternative 2 with an additional new LTF constructed at Fantasy Island in No Name Bay. Impact of the new site will include intertidal habitat covered with shot rock and an estimated 3.3 acres of subtidal habitat covered with accumulating bark.	Same as Alternative 3 except the new LTF site is moved to a point outside of the mouth of the bay.

Summary

Table S-1 continued

Summary Comparison of Alternatives

Issue	Alternative 1 No Action	Alternative 2 North Kuiu
Recreation	No additional impact.	Rowan Bay, Cool and Ledge Lakes and the Port Camden area will become roaded and developed.
Soils	No additional impact.	No roads would be located on high hazard soils. No high hazard soils would be harvested.
Subsistence	No additional impact.	There may be a significant restriction of subsistence use of deer.
Timber	No additional impact.	4,762 acres would be harvested. 56 miles of specified and 25 miles of temporary road would be constructed. Units meet proportionality requirements as specified in TTRA.

Alternative 3 East Kuiu	Alternative 4 North and East Kuiu
Most recreation places in the east Kuiu and Port Camden areas would be affected.	Impacts to existing recreation places and opportunities would occur in the east Kuiu area.
No roads would be located on high hazard soils. 75 acres of high hazard soils would be harvested.	No roads would be located on high hazard soils. No high hazard soils would be harvested.
There may be a significant restriction of subsistence use of deer.	There may be a significant restriction of subsistence use of deer.
5,527 acres would be harvested. 83 miles of specified and 37 miles of temporary road would be constructed. Units meet the proportionality requirements as specified in TTRA.	5,203 acres would be harvested. 60 miles of specified and 32 miles of temporary road would be constructed. Units meet the proportionality requirements as specified in TTRA.

Summary

Table S-1 continued

Summary Comparison of Alternatives

Issue	Alternative 1 No Action	Alternative 2 North Kuiu
Visual Resource	Landscapes of Kuiu Island would be maintained in their current visual condition.	Harvest would be deferred in West Security Bay, Alvin and Reid Bays, the Salt Lagoon and No Name Bay. Activities in East Port Camden would dominate the seen area.
Water Quality	No additional impact.	Lowest risk of sedimentation. BMP implementation and monitoring will assure compliance with the Clean Water Act.
Wildlife Habitat Capability (Number of Animals) Sitka Black-tailed Deer Black Bear Marten River Otter	 8,781 440 758 266	 8,639 437 741 266

Alternative 3	Alternative 4
East Kuiu	North and East Kuiu
Landscapes of Port Camden and east Kuiu Island would receive the greatest impact as a result of timber harvest.	Harvest in the east side of Port Camden would be deferred. The road into VCU 416 would stop north of Alvin Bay.
Activities would dominate the landscapes of the Salt Lagoon, Port Camden, and Alvin and Reid Bays.	Activities would dominate the landscapes of the Salt Lagoon and No Name Bay.
Highest risk of sedimentation.	Moderate risk of sedimentation.
BMP implementation and monitoring will assure compliance with the Clean Water Act.	BMP implementation and monitoring will assure compliance with the Clean Water Act.
8,667	8,639
439	439
739	740
266	266

Summary

Table 2-7 continued

Summary Comparison of Alternatives

Issue	Alternative 1	Alternative 2
	No Action	North Kuiu
Habitat Capability (cont.)		
Bald Eagle	543	541
Habitat Types		
Beach Fringe	No additional impact.	No additional impact.
Estuary Fringe	No additional impact.	No additional impact.
Streamside Riparian	No additional impact.	109 acres harvested -- less than 1% decrease in existing habitat.
Forested	No additional impact.	4,887 acres ¹ harvested -- 3% decrease in existing habitat.
Old-Growth Habitat Blocks	No additional impact.	Fragmentation only in Cool Lake Block will be minimized by group selection harvest.
¹ Acres of habitat include total acres of partial cut units.		
Source: Condon, 1992		

Alternative 3	Alternative 4
East Kuiu	North and East Kuiu
539	541
8 acres harvested --less than 1% decrease in existing habitat.	8 acres harvested -- less than 1% decrease in existing habitat.
0 acres harvested --no additional impact.	No additional impact.
109 acres harvested --less than 1% decrease in existing habitat.	135 acres harvested -- less than 1% decrease in existing habitat.
5,350 acres harvested -- 3% decrease in existing habitat	5,372 acres harvested -- 32% decrease in existing habitat.
Salt Lagoon Block has approximately 8% harvested. Units are designed to minimize fragmentation by providing travel corridor from Tebenkof Wilderness to Salt Lagoon.	Salt Lagoon Block has approximately 8% harvested. Units are designed to minimize fragmentation by providing travel corridor from Tebenkof Wilderness to Salt Lagoon. Fragmentation in Cool Lake Block will be minimized by group selection harvest.

Issue 1: CULTURAL RESOURCES - How should timber management activities be designed to protect cultural resources?

A probability model has been applied to each alternative to gauge the potential effect to cultural resources. Generally, those alternatives which favor more development pose a greater threat to undiscovered cultural resources. Implementation of a 500-foot beach fringe buffer zone for all alternatives and a 1,000-foot estuary buffer zone for most alternatives has effectively eliminated the areas of highest potential for cultural resources. Results of field surveys indicate that none of the alternatives will effect significant sites, that is, those eligible to the National Register of Historic Places.

Issue 2: ECONOMICS - How will the project effect the health of the economy of southeast Alaska? Is the proposed project economically efficient?

The baseline for comparison is the No Action Alternative (Alternative 1). Under this alternative all available timber would be harvested by the end of the 1992 operating season. This alternative assumes that no further volume would be made available to support existing operations at Rowan Bay for the near future. This alternative would result in the following impacts to the local economy:

- The logging camp at Rowan Bay would be forced to close. A total of approximately 85 (APC 1981-86 and 1986-90 SEIS, USDA Forest Service, 1989) jobs would be lost and several families would be forced to move from Rowan Bay if the volume to that camp were not replaced.
- The annual production from Rowan Bay supports approximately 96 jobs in the sawmill and pulp production industries (APC 1981-86 and 1986-90 SEIS, USDA Forest Service, 1989). If the volume from Rowan Bay is not replaced by volume from another location, these jobs will likely be lost. These jobs are located primarily in Sitka and Wrangell.
- The jobs described under the two items above are considered direct employment; that is they are a direct result of the timber harvest and production. For each one of those jobs that is eliminated, there is an additional 0.7 jobs in the indirect and induced categories that will be lost. (Indirect and induced jobs are those jobs in sectors of the economy that provide goods and services to the logging, sawmill, and pulpmill sectors and also to the families of those people employed in those primary sectors.) In addition to the lost employment, there would be lost income that would be felt throughout the economy of southeast Alaska.

Under Alternatives 2 through 4 the current rate of production at Rowan Bay would be maintained. The contribution to the economy of southeast Alaska from the logging activity on Kuio would continue at its current level. This includes over 300 jobs in all areas of the economy. If all of the volume made available by this project were harvested over a three year period, the employment would be greatest under Alternative 4 which would support approximately 342 jobs per year for the three years. Alternative 2 would be next with 296 jobs, and Alternative 3 would support the least jobs of the action alternatives with 237 jobs

(Table S-3). There is no guarantee that employment rates will actually differ under any of the alternatives since harvest and production rates are most likely to fluctuate in response to market conditions.

Table S-3				
Employment Impacts (# of Jobs)				
	Alt 1	Alt 2	Alt 3	Alt 4
Direct	0	160	182	185
Indirect and Induced	0	136	155	157
Total Employment	0	296	237	342
Source: Condon, 1992				

This issue of economics was raised in part over concern that logging activity on Kuiu might adversely effect other sectors of the economy, most notably tourism and commercial fishing. There is no evidence that either of these sectors will be noticeably effected by any of the alternatives.

The second part of the economic issue has to do with the economic efficiency of the alternatives. The data in Table S-4 suggests that all of the action alternatives are economically viable. All except Alternative 1 will contribute to the economic health of Southeast Alaska. These estimates are based on a mid-market selling price for timber from Kuiu Island under the current contract terms.

Table S-4

Timber Cost and Value Summary

	Alt 2	Alt 3	Alt 4
Volume (MMBF Sawlog)	102	116	118
Selling Value (\$/MBF)	\$ 337.80	\$ 340.07	\$ 338.99
Costs (\$/MBF)			
Stump to Truck	\$ 102.84	\$ 103.17	\$ 95.85
Transportation	\$ 56.49	\$ 60.13	\$ 47.36
Temporary Roads	\$ 16.39	\$ 21.0	\$ 18.27
Other Temp Develop.	\$.50	\$.90	\$ 0.88
Specified Roads	\$ 66.46	\$ 100.08	\$ 70.21
Profit and Risk	\$ 44.88	\$ 45.75	\$ 47.49
Net Stumpage Value	\$ 50.24	\$ 9.04	\$ 58.93
Source: Gerdes, 1992			

Issue 3: FISH - How would fisheries habitat be managed and what effects would timber harvest and related activities have on fisheries habitat?

The No Action Alternative provides the baseline for comparing the effects of the alternatives on fisheries habitat. The evaluation presented in Chapter 3 of the FEIS shows that the potential effects on fisheries habitat are minimal under all alternatives. All streams that support runs of salmon or steelhead, as well as their tributaries that support populations of resident fish, are protected by buffers of at least 100 feet. No trees will be harvested within these buffers. Salvage will only be permitted in these buffers zones where it has been determined that salvage is necessary for resource protection or enhancement.

All other streams will be protected according to direction provided in the Alaska Region Aquatic Habitat Management Unit (AHMU) Guidelines (Forest Service 1986a), and/or the Soil and Water Conservation Handbook (Forest Service) and by the specific mitigation measures listed on the road descriptions and unit plans.

Issue 4: Marine Environment - If additional log transfer facilities (LTFs), are needed, how can they be designed and located in a manner that minimizes the effects on the marine environment?

The No Action Alternative would have the least effect on the marine environment by discontinuing the use of the Rowan Bay LTF. (This may not be true if this alternative would cause the timber industry to look to another location for a replacement supply of logs and as a result use, or construct another LTF.)

Of the three action alternatives, alternative 2 would have the least impact on the marine environment by restricting use of LTFs to the existing facilities at Rowan Bay and Saginaw Bay. In addition, Alternatives 3 and 4 would also involve constructing a new facility at No Name Bay.

Issue 5: RECREATION - How should recreation opportunities be protected or enhanced in the design of timber management activities?

All of the action alternatives increase roaded access to the interior of the island. Alternatives 2 and 4 provide road access to a potential day use beach site just north of Rowan Bay. Under Alternatives 1 and 2, VCU's 416, 417, and 418 would retain their unroaded character.

Issue 6: SOIL - How should timber management activities be designed to protect the soil resource? What effects would activities have on soils?

All alternatives are expected to equally meet or exceed Soil Quality Standards (FSH 2509.18 Soil Management Handbook R-10 Supplement 1/92), and therefore, have no measurable adverse effect on the long-term productivity of the soil.

The relative risk of excessive soil erosion from timber harvest can be rated in terms of the amount of timber harvest and road construction on hazardous soil types. Tables S-5 and S-6 visually display the risks associated with each alternative.

Table S-5				
Acres of Proposed Harvest by Soil Hazard Class ¹				
Soil Hazard Class	Alternative			
	1	2	3	4
Low	0	1,855	1,900	2,268
Moderate	0	3,189	3,610	3,284
High	0	0	75	0
Total	0	5,044	5,585	5,552
¹ Acres include entire partial cut unit area.				
Source: Kissinger, 1991				

Table S-6

Miles of Proposed Road by Soil Hazard Class ¹

Soil Hazard Class	Alternative			
	1	2	3	4
Low	0	53	82	64
Moderate	0	28	38	28
High	0	0	0	0
Total	0	81	120	92

¹ Includes both forest development and temporary road miles.

Source: Kissinger, 1991

Issue 7: SUBSISTENCE - How should timber management activities be designed to protect traditional subsistence uses? What effect would activities have on subsistence uses?

Action alternatives have been designed to avoid those areas of most importance to subsistence users (i.e., Security Bay, Saginaw Bay, Kadake Bay, and Port Camden). The proposed activities scheduled for implementation on Kuiu Island are anticipated to have very limited effects on subsistence users in the affected rural communities. We believe that these communities will continue their present intuitive hunting patterns based on availability, demand, and access. Competition does not appear to be a major factor as the study area has been closed to deer harvest since 1975. For each of the action alternatives, it has been determined that there may be a significant restriction for deer subsistence use.

Issue 8: TIMBER MANAGEMENT - How should the project be designed to provide for efficient and productive long-term timber management?

There are approximately 23,000 acres of existing timber harvest units in the project area. It is anticipated that all proposed harvest units will be certified as having adequate regeneration resulting from natural occurring seed.

Table S-7 displays by alternative the acres of past harvest, acres of proposed harvest, total harvest, and the effects of total harvest on operable commercial forest land (CFL), commercial forest land, and total land area.

Table S-7

Acres of CFL to be Harvested by Action Alternative

Alternative	Past Harvest	Proposed Harvest	Total Proposed Harvest	Percent Harvested		
				Operable CFL	CFL	Land Area
2	22,361	4,762	27,123	23%	16%	12%
3	22,361	5,527	27,889	23%	17%	12%
4	22,361	5,203	27,564	23%	17%	12%

Source: Gerdes, 1991

Table S-8 displays by alternative how the proportionality requirement of the 1990 Tongass Timber Reform Act is achieved. The percent of acres in volume class strata 6 and 7 remaining after harvest would not change more than one-half of one percent in any alternative.

Table S-8

Percent of Volume Class Strata Proportionality in Alternatives

	Timber Base (acres) ²	Volume Class Strata 6 & 7 (acres)	Proportion (%)	% Change from Original Acres ³
Management Area S04				
Original Mgt. Area Total	92,616	23,628	25.51	
Alternative 1 (No Action) ¹	- 750	- 270		
Remaining Mgt. Area Total	91,866	23,358	25.43	-0.09%
Alternative 2	- 3,107	- 945		
Remaining Mgt. Area Total	89,509	22,683	25.34	-0.17%
Alternative 3	- 1,454	- 500		
Remaining Mgt. Area Total	91,162	23,128	25.37	-0.14%
Alternative 4	- 3,107	- 945		
Remaining Mgt. Area Total	89,509	22,683	25.34	-0.17%
Management Area S09				
Original Mgt. Area Total	48,493	3,593	7.41	
Alternative 1 (No Action) ¹	- 934	- 16		
Remaining Mgt. Area Total	47,559	3,577	7.52	0.11%
Alternative 2	- 2,896	- 79		
Remaining Mgt. Area Total	45,597	3,514	7.71	0.30%
Alternative 3	- 5,330	- 367		
Remaining Mgt. Area Total	43,162	3,226	7.47	0.06%
Alternative 4	- 3,449	- 316		
Remaining Mgt. Area Total	45,043	3,277	7.27	-0.13%

Source: Gerdes, 1992

¹ The No Action Alternative displays the effect of harvest that has occurred since the passage of the TTRA (November 28, 1990). This is the acreage base for other alternatives.

² Timber base - to assess proportionality, each of the TLMP Management Areas must be updated to determine the volume currently represented (as of November 28, 1990) within each management area. As a matter of policy, this excludes all Wilderness, TTRA designated LUD II areas, and Class I and applicable Class II streamside buffer zones established by the Tongass Timber Reform Act. The total remaining old-growth (herein called the timber base) within each management area is considered for proportionality.

³ A negative % indicates volume class strata 6 and 7 proportionality has declined from the original % as determined at the time of passage of TTRA (Nov. 28, 1990). Regional policy allows for a negative change of up to 0.50% as long as it can be made up in subsequent NEPA proposals.

Issue 9: VISUAL RESOURCE - How should timber management activities be designed to protect the visual resource and what effect would activities have on the landscapes of Kuiu Island? Where are the areas of highest scenic value and how will timber management activities be designed to protect these values?

Alternative 1 allows for areas of high scenic quality to be maintained in their current visual condition and evolve naturally. These areas include: North Rowan Bay, West Security Bay, Washington Bay, the Salt Lagoon, No Name Bay, Alvin and Reid Bays. Landscapes would be allowed to visually recover where harvest has occurred in the past.

Alternative 2 defers harvest in west Security Bay, Alvin and Reid Bays, the Salt Lagoon, and No Name Bay. Activities in east Port Camden would dominate the seen area, creating a high degree of visual change to this landscape.

Timber harvest activities proposed in Alternative 3 would dominate landscapes associated with the Salt Lagoon, Alvin and Reid Bays, and Port Camden. Impacts would be greatest to Port Camden and east Kuiu Island.

Of the action alternatives, Alternative 4 would have the least overall effect to the visually sensitive areas of Kuiu Island. The east side of Port Camden would not be entered for timber harvest at this time, maintaining the visual quality of this area. The road into VCU 416 would stop north of Alvin Bay, but harvest units within the watershed.

Issue 10: WATER QUALITY - How should timber management activities be designed to protect water quality? What effects would activities have on water quality?

Risk of sedimentation and associated impacts for each alternative can be compared by using indicators of potential disturbance. These indicators include timber harvest acreage, harvest on high hazard soils, stream mileage within and bordering clearcuts, road mileage, and stream crossing numbers. In all cases, Alternative 3 involves the greatest amount of disturbance. Alternative 1 involves the least disturbance. And while Alternatives 4 and 2 are quite similar, Alternative 4 has a slightly higher potential for sediment production.

Best Management Practices are applied equally to all alternatives. Each alternative will meet the goals of the Clean Water Act.

A watershed sensitivity analysis evaluated the potential cumulative watershed impacts caused by timber harvest activities. Browns Creek watershed will reach its threshold of concern value if Alternative 2 or 4 is implemented. All other watersheds, for all alternatives, will remain below the calculated threshold values.

Issue 11: WILDLIFE - How would wildlife habitat be managed and what effects would timber harvest and related activities have on wildlife habitat.

The No Action Alternative would reduce the impact to wildlife habitat that would otherwise occur to the current level following completion of harvest of the current operating period. No new harvest activity would occur and harvested stands would continue to mature.

All three action alternatives will have impacts on the wildlife indicator species. Marten and Sitka black-tailed deer will have the most impacts, however, the highest impacts would be a 3% decrease in the marten habitat in Alternative 3 and a 2% decrease in Alternatives 2 and 4 for deer. The remainder of indicator species habitats are impacted by 1% or less.

The habitat types of beach fringe, estuary, streamside riparian, and forested will be impacted to some extent by all three action alternatives--forested habitat by as much as 3% in all action alternatives. All other habitat types are reduced by less than 1%.

Of the seven large old-growth blocks located in the areas covered in this document, Conclusion, Kutlaku and Rocky Pass are not impacted by harvest. Cool Lake will be minimally impacted due to the group selection harvest. Fragmentation will not occur because units harvested will mimic naturally occurring openings through "group selection" (openings of less than two acres in size). The Kadake area will have minor harvest in all alternatives with the largest occurring in Alternatives 2 and 4 with 1.14% harvested. Salt Lagoon will have significant harvest occurring in Alternatives 3 and 4. A total of 8% or less of the area will be harvested with some fragmentation of habitat. Only Alternative 2 has no harvest activities occurring in this old-growth block.

Identification of the Forest Service Preferred Alternative

To recommend a preferred alternative, the Stikine Area Management Team evaluated the benefits and impacts of each alternative and gave particular consideration to how each alternative responded to the significant issues. Alternative 4, which would disperse development throughout the entire area, is identified as the Forest Service Preferred Alternative for this Final EIS.

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